

## Curriculum Links Summary

As well as being adapted to suit your group and their specific learning objectives, our activities can support key areas of the curriculum outlined in the table below and in the reference books following.

	Key Stage 1	Key Stage 2	Key Stage 3
<b>Abseiling &amp; Climbing</b>		Physical Education: 1, 2, 3 & 4	Physical Education: 1, 2, 3, 4 & 5
<b>Adventure Trail</b>	Geography: Geographical skills and fieldwork 2 & 3 Physical Education: 1 & 2	Geography: Geographical skills and fieldwork 2 Physical Education: 1 & 3	
<b>Animal Tracks</b>	Geography: Human and Physical Geography 2a Science: Working Scientifically 2, 4, 5 & 6 Animals Including Humans 1, 2, 3, 4, 5 & 6 Living Things & Their Habitats 1, 2, 3 & 4	Science: Working Scientifically 1, 4, 5, 6, 7, 12, 13 & 14 Animals Including Humans 1 & 2 Living Things & Their Habitats 1, 2, 3, 6 & 7 Evolution & Inheritance 1 & 2 Physical Education: 3	Science: Working Scientifically 1, 4, 5, 6, 7, 12, 13 & 14 Animals Including Humans 1 & 2 Living Things & Their Habitats 1, 2, 3, 6 & 7 Evolution & Inheritance 1 & 2 Physical Education: 3
<b>Archery</b>		Physical Education: 1, 2, 3 & 4	Physical Education: 1, 2, 3, 4 & 5
<b>Art in the Environment</b>	Art and Design: 1, 2, 3 & 4 Design and Technology: Design 1 & 2 / Make 2 / Evaluate 1 Geography: Human and Physical Geography 2a	Art and Design: 1 & 2 Design and Technology: Make 2 / Evaluate 2 Physical Education: 3	Art and Design: 1 & 2 Design and Technology: Make 2 / Evaluate 1 Physical Education: 3
<b>Bushcraft</b>	Art and Design: 1, 2 & 3 Design and Technology: Design 1 & 2 / Make 1 & 2 / Evaluate 1 & 2 Technical Knowledge 1 Cooking and Nutrition 1 & 2 Geography: Human and Physical Geography 2a Science: Plants 1 / Animals Including Humans 1 & 6 Everyday Materials 3 Uses of everyday materials 1 & 2 Physical Education: 1 & 2	Art and Design: 1 Design and Technology: Make 1 & 2 / Evaluate 2 Technical Knowledge 1 Cooking and Nutrition: 1 & 2 Science: Plants 1 / Animals Including Humans 1 Physical Education: 1, 2 & 3	Art and Design: 1 Design and Technology: Make 1 & 2 / Evaluate 1 Technical Knowledge 1 Cooking and Nutrition: 1 & 2 Science: Plants 1 / Animals Including Humans 1 Physical Education: 3
<b>Canoeing &amp; Kayaking</b>	Geography: Human and Physical geography 2a Science: Plants 1 / Animals, Including Humans 1 Physical Education: 1, 2 & 5	Physical Education: 1, 2, 3, 4 & 7	Physical Education: 1, 2, 3, 4 & 5
<b>Challenge Course</b>		Physical Education: 1, 2 & 3	
<b>Discovery Walk</b>	Art and Design: 1, 2 & 3 Design and Technology: Design 1 & 2 / Make 2 / Evaluate 1 Cooking and Nutrition 2	Art and Design: 1 Design and Technology: Make 2 Science: Plants 1 / Sound 1 & 2	Art and Design: 1 Science: Plants 1 / Sound 1 & 2 Physical Education: 3

	Geography: Human and Physical Geography 2a Science: Plants 1 / Animals including humans 1 & 4 Physical Education: 1 & 2	Physical Education: 3	
<b>Egg Drop</b>	Design and Technology: Design 2 Physical Education: 1 & 2	Physical Education: 1, 2, 3 & 4	Physical Education: 3 & 4
<b>Forest Walk</b>	Geography: Place Knowledge 1 Human and Physical Geography 2a Geographical skills and fieldwork 2 & 4 Science: Working Scientifically 1 & 2 / Plants 1 Animals including humans 1, 2, 3 & 5 Living things and their habitats 2 & 3 Physical Education: 1	Geography: Human and Physical Geography 1a Geographical Skills and Fieldwork 2 & 3 Science: Working Scientifically 9 / Plants 1 Animals including humans 2 Living things and their habitats 1 Evolution and inheritance 2 Physical Education: 2	Geography: Human and Physical Geography 1a Geographical skills and fieldwork 2 & 3 Science: Working Scientifically 9 / Plants 1 Animals including humans 2 Living things and their habitats 1 Evolution and Inheritance 2 Physical Education: 3
<b>Geocaching</b>	Geography: Human and Physical Geography 2a & 2b Geographical skills and fieldwork 2 & 3	Geography: Geographical skills and fieldwork 2 & 3 Physical Education: 1, 2, 3 & 4	Geography: Geographical skills and fieldwork 2 Physical Education: 1 & 3
<b>High Ropes</b>		Physical Education: 1, 2 & 3	Physical Education: 3 & 4
<b>Icebreakers</b>		Physical Education 1, 2, 3 & 4	Physical Education: 3 & 4
<b>Low Ropes</b>		Physical Education: 1, 2 & 3	Design and Technology: Design 2 Physical Education: 3 & 4
<b>Mini Beasts</b>	Geography: Human and Physical Geography 2a Geographical skills and fieldwork 4 Science: Working scientifically 1, 2, 3, 4, 5 & 6 Animals including humans 1, 2, 5 & 6 Living things and their habitats 2, 3 & 4	Geography: Geographical skills and fieldwork 3 Science: Working scientifically 1, 2, 3, 4, 5, 6, 7, 9, 12 & 14 Animals including humans 1, 2 & 3 Living things and their habitats 1, 2, 4, 5, 6 & 7 Evolution and Inheritance 1 & 2 Physical Education: 3	Geography: Geographical Skills and Fieldwork 3 Science: Working scientifically 1, 2, 3, 4, 5, 6, 7, 9, 12 & 14 Animals including humans 1, 2 & 3 Living things and their habitat 1, 2, 4, 5, 6 & 7 Evolution and Inheritance 1 & 2 Physical Education: 3
<b>Mountain Biking</b>		Physical Education: 1, 2, 3 & 4	Geography: Geographical skills and fieldwork: 2 Physical Education: 1, 2, 3, 4, 5
<b>Navigation</b>	Geography: Human and Physical Geography 2a & 2b Geographical skills and fieldwork 2, 3 & 4 Art and Design: 1 Physical Education: 1	Geography: Geographical skills and fieldwork 2 & 3 Physical Education: 1, 2, 3 & 4	Geography: Geographical skills and fieldwork 2 Physical Education: 1 & 3
<b>Night Walk</b>	Art and Design: 1 Design and Technology: Cooking and Nutrition 2 Geography: Place Knowledge 1	Physical Education: 3	Geography: Human and Physical Geography 1a Science: Light 1, 2 & 3 / Sound 1, 2 Earth and Space 1, 2, 3 & 4

	Human and Physical Geography 2a Science: Working scientifically 1, 2, 3 & 5 / Plants 1 Physical Education: 1		Forces 1 Physical Education: 3
<b>Orienteering</b>	Geography: Human and Physical Geography 2a & 2b Geographical skills and fieldwork 2 & 3 Art and Design: 1 Physical Education: 1	Geography: Geographical skills and fieldwork 2 & 3 Physical Education: 1, 2, 3 & 4	Geography: Geographical skills and fieldwork 2 Physical Education: 1 & 3
<b>Pioneering</b>	Design and Technology: Design 1 & 2 / Make 2 / Evaluate 2 Technical Knowledge 1 Physical Education: 1	Physical Education: 3 & 4	Design and Technology: Design 2 & 3 Physical Education: 3 & 4
<b>Pond Dipping</b>	Geography: Human and Physical Geography 2a Geographical Skills and Fieldwork 4 Science: Working scientifically 1, 2, 3, 4, 5 & 6 Animal Including Humans 1, 2, 5 & 6 Living Things and Their Habitats 2, 3 & 4	Geography: Geographical skills and fieldwork 3 Science: Working Scientifically 1, 2, 3, 4, 5, 6, 7, 9, 12 & 14 Animals including humans 1, 2 & 3 Living Things and Their Habitats 1, 2, 4, 5, 6 & 7 Evolution and inheritance 1 & 2 Physical Education: 3	Geography: Geographical skills and fieldwork 3 Science: Working Scientifically 1, 2, 3, 4, 5, 6, 7, 9, 12 & 14 Animals including humans 1, 2 & 3 Living Things and Their Habitats 1, 2, 4, 5, 6 & 7 Evolution and inheritance 1 & 2 Physical Education: 3
<b>Problem Solving</b>	Design and Technology: Design 1 & 2 Science: Working Scientifically 1, 2, 3 & 5 Physical Education: 1 & 2	Physical Education: 1, 2, 3 & 4	Design and Technology: Design 1 & 2 Geography: Geographical skills and fieldwork 2 Physical Education: 3 & 4
<b>Raft Building</b>		Physical Education: 1, 2, 3, 4 & 7	Design and Technology: Design 2 & 3 Physical Education: 3 & 4
<b>Shelter Building</b>	Art and Design: 1, 2 & 3 Design and Technology: Design 1 & 2 / Make 2 Technical Knowledge 1 Science: Living things and their habitats 1 Physical Education: 1 & 2	Design and Technology: Make 1 & 2 / Evaluate 1 & 2 Technical Knowledge 1 Physical Education: 2, 3 & 4	Design and Technology: Make 1 & 2 / Evaluate 1 Technical Knowledge 1 Physical Education: 3 & 4
<b>Tree Climbing</b>		Science: Working scientifically 1 & 5 Plants 1, 2 & 3 / Forces 1 Physical Education: 1, 2, 3 and 4	Physical Education: 1, 2, 3 & 4
<b>Trust Walk</b>		Physical Education: 1, 2, 3 & 4	Design and Technology: Design 2 Physical Education: 3
<b>Zip Wire</b>		Geography: Geographical skills and fieldwork 3 Science: Working Scientifically 1, 2, 3, 4, 5, 7, 10 & 11 Forces 1 Physical Education: 1, 2, 3 & 4	Physical Education: 3 & 4 Science: Scientific Attitudes 1 & 2 Experimental Skills and Investigation 1, 2, 3, 5 & 6 Analysis and Evaluation 1, 2, 3, 4, 5 & 6

## **Curriculum Links Reference Book: Key Stage 1**

### **English**

The National Curriculum for English reflects the importance of spoken language in learners' development across the whole curriculum. Through our sessions, the benefits and curriculum links will vary greatly depending on the group, with each session being tailored to the needs of the group.

Sessions will particularly aid in the following:

- Being encouraged to link what they read or hear read to their own experiences
- Recognising and joining in with predictable phrases
- Learning to appreciate rhymes and poems
- Discussing word meanings, linking new meanings to those already known
- Name the letters of the alphabet

The sessions provide multiple opportunities for extended learning, for example:

- Discussing what is read to them, taking turns and listening to what others say
- Comparing and contrasting activities on site to those at school

### **Mathematics**

Mathematics is integral to many Field Studies sessions, helping students become fluid in their approach. The extent to which Mathematics is covered will greatly depend on the needs of the groups.

Sessions may aid in the following:

- Developing confidence and mental fluency with whole numbers, counting and place value
- Recognising, describing and drawing different shapes
- Sorting and comparing shapes
- Solving one-step problems
- Taking and recording a range of measurements

### **Citizenship**

We understand that citizenship education helps young people to develop the skills, knowledge and understanding required to prepare them to play a full and active part in society. The Citizenship curriculum is embedded within practice at Avon Tyrell. Learners are encouraged to work within a team environment, managing their own time and resources, making and debating reasoned arguments, and exploring social issues in a safe environment.

Sessions may support the following areas:

- Developing confidence and responsibility and making the most of their abilities
- Preparing to play an active role as citizens
- Developing a healthy, safer lifestyle
- Developing good relationships and respecting the differences between people
- Increasing the breadth of opportunities

## Science

The principle focus of the Science National Curriculum at KS1, is to enable students to experience and observe phenomena, looking more closely at the natural and humanly-constructed world around them. Field Studies sessions in particular address a wide range of curriculum topics, encouraging students to be curious and ask questions.

### Working Scientifically

1. Asking simple questions and recognizing that they can be answered in different ways.
2. Observing closely, using simple equipment
3. Performing simple tests
4. Identifying and classifying
5. Using their observations and ideas to suggest answers to questions
6. Gathering and recording data to help in answering questions

### Year 1 Programme of study

#### *Plants*

1. Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
2. Identify and describe the basic structure of a variety of common flowering plants, including trees

#### *Animals, including humans*

1. Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals
2. Identify and name a variety of common animals that are carnivores, herbivores and omnivores

#### *Everyday materials*

1. Distinguish between an object and the material from which it is made
2. Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
3. Describe the simple physical properties of everyday materials
4. Compare and group together a variety of everyday materials on the basis of their simple physical properties

#### *Seasonal changes*

1. Observe changes across the four seasons
2. Observe and describe weather associated with the seasons and how day length varies

### Year 2 Programme of study

#### *Living things and their habitats*

1. Explore and compare the differences between things that are living, dead and things that have never been alive
2. Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other
3. Identify and name a variety of plants and animals in their habitats, including micro-habitats

#### *Plants*

1. Observe and describe how seeds and bulbs grow into mature plants
2. Find out and describe how plants need water, light and a sustainable temperature to grow and stay healthy

#### *Animals, including humans*

1. Notice that animals, including humans, have offspring which grow into adults
2. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)
3. Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene

### *Use of everyday materials*

1. Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
2. Find out how shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

## **Art and Design**

At Avon Tyrrell, we aim to engage, inspire and challenge learners, encouraging them to experiment and create their own pieces of art, craft and design.

Key areas covered may include:

1. Using a range of materials creatively to design and make products
2. To use drawing, painting and sculpture to develop and share their ideas, experiences and imagination
3. To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space

## **Design and Technology**

Design and Technology encourages the use of creativity and imagination in designing and making products to solve real and relevant problems. It enables students to learn to take risks in their design work, and become confident in their problem solving abilities.

Key areas covered include:

### Design

1. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups

### Make

1. Select from and use a range of tools and equipment to perform practical tasks
2. Select from and use a wide range of materials and components

### Evaluate

1. Explore and evaluate a range of existing products
2. Evaluate their ideas and products against design criteria

### Technical Knowledge

1. Build structures, exploring how they can be made stronger, stiffer and more stable
2. Explore and use mechanisms (for example, levers, sliders, wheels and axels) in their products

## **Geography**

The Geography National Curriculum aims to ensure that all learners develop an understanding of places, people, resources and natural and human environments, together with a deep understanding of the Earth's key physical and human processes. The New Forest offers a wide range of geographical features for study.

### Human and physical geography

1. Identify seasonal and daily weather patterns in the United Kingdom
2. Use basic geographical vocabulary to refer to:

- a. Key physical features, including: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather
- b. Key human features, including: city, town, village, factory, farm, house, office, port, harbor and shop

### Geographical skills and fieldwork

1. Use world maps, atlases and globes to identify the United Kingdom and its countries
2. Use simple compass directions (North, South, East and West) and locational and directional language (for example, near and far; left and right) to describe the location of features and routes on a map
3. Use aerial photographs and plan perspectives to recognize landmarks and basic human and physical features; devise a simple map; and use and construct symbols on a key
4. Use simple fieldwork and observational skills to study the geography of their school and its grounds and the key human and physical features of its surrounding environment

### History

Avon Tyrrell is steeped in local History – the house is a Grade I Listed building and is situated on the edge of The New Forest National Park.

1. Changes within living memory. Where appropriate, these should be used to reveal aspects of change in national life
2. Events beyond living memory that are significant nationally or globally
3. The lives of significant individuals in the past who have contributed to national and international achievements
4. Significant historical events, people and places in their own locality

### Physical Education

With a wide range of outdoor activities available at Avon Tyrrell, there are many ways to link to the National Curriculum for Physical Education, to enable all young people to succeed and excel in a wide range of physically demanding activities. Our activities provide the perfect opportunity for learners to become physically confident in a way which supports their health and fitness.

1. Master basic movements including running, jumping, throwing and catching, as well as developing balance, agility and co-ordination, and begin to apply these in a range of activities
2. Participate in team games.

## Curriculum Links Reference Book: Key Stage 2

### **English**

The National Curriculum for English reflects the importance of spoken language in learners' development across the whole curriculum. Through our sessions, the benefits and curriculum links will vary greatly depending on the group, with each session being tailored to the needs of the group.

Sessions will particularly aid in the following:

- Learning of new vocabulary
- Use of descriptive English
- Using standard English confidently in a range of formal and informal contexts
- Classroom discussion and expression of own ideas
- Summarising and/or building on what has been said

The sessions provide multiple opportunities for extended learning, for example:

- Discussing outcomes
- Comparing and contrasting activities on site to those at school
- Presentation work

### **Mathematics**

Mathematics is integral to many Field Studies sessions, helping studies become fluid in their approach. The extent to which Mathematics is covered will greatly depend on the needs of the groups.

Sessions may aid in the following:

- Solving problems with addition and subtraction, division and multiplication
- Checking calculations for accuracy
- Recognising, naming and writing fractions
- Choosing and using appropriate standard units
- Estimation of length/height in any direction, mass, temperature and capacity
- Knowing the number of minutes in an hour and the number of hours in a day
- Identify basic 2D and 3D shapes
- Ordering and arranging patterns and sequences
- Interpreting and constructing tally charts and simple tables

### **Citizenship**

We understand that citizenship education helps young people to develop the skills, knowledge and understanding required to prepare them to play a full and active part in society. The Citizenship curriculum is embedded within practice at Avon Tyrell. Learners are encouraged to work within a team environment, managing their own time and resources, making and debating reasoned arguments, and exploring social issues in a safe environment.

Sessions may support the following areas:

- Developing confidence and responsibility and making the most of their abilities
- Preparing to play an active role as citizens
- Developing a healthy, safer lifestyle
- Developing good relationships and respecting the differences between people
- Increasing the breadth of opportunities



## Science

The principle focus of the Science National Curriculum at KS2, is to broaden learners scientific view of the world around them. Field Studies sessions in particular address a wide range of curriculum topics, with a particular focus on working scientifically and life processes.

### Lower Key Stage 2 (Year 3 and 4)

#### Working Scientifically

1. Asking relevant questions and using different types of scientific enquiries to answer them
2. Setting up simple practical enquiries, comparative and fair tests
3. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
4. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
5. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
6. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
7. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
8. Identifying differences, similarities or changes related to simple scientific ideas and processes
9. Using straightforward scientific evidence to answer questions or to support their findings

#### Year 3 Programme of study

##### *Plants*

1. Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
2. Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant
3. Investigate the way in which water is transported within plants
4. Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal

##### *Animals, including humans*

1. Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat
2. Identify that humans and some animals have skeletons and muscles for support, protection and movement

##### *Rocks*

1. Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
2. Describe in simple terms how fossils are formed when things that have lived are trapped in rock
3. Recognise that soils are made from rocks in organic matter

#### Year 4 Programme of study

##### *Living things and their habitats*

1. Recognise that living things can be grouped in a variety of ways
2. Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
3. Recognise that environments can change and that this can sometimes pose dangers to living things

##### *Animals, including humans*

1. Describe the simple functions of the basic parts of the digestive system in humans
2. Construct and interpret a variety of food chains, identifying producers, predators and prey

##### *Sound*

1. Identify how sounds are made, associating some of them with something vibrating
2. Recognise that vibrations from sounds travel through a medium to the ear
3. Recognise that sounds get fainter as the distance from the sound source increases

## Upper Key Stage 2

### Working Scientifically

1. Planning different types of scientific enquiries to answer questions, including recognizing and controlling variables where necessary
2. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
3. Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
4. Using test results to make predication to set up further comparative and fair tests
5. Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
6. Identifying scientific evidence that has been used to support or refute ideas or arguments

### Year 5 Programme of study

#### *Living things and their habitats*

1. Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
2. Describe the life process of reproduction in some plants and animals

### Year 6 Programme of study

#### *Living things and their habitats*

1. Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals
2. Give reasons for classifying plants and animals based on specific characteristics

#### Animals, including humans

1. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function

#### Evolution and inheritance

1. Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago
2. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents
3. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution

## Art and Design

At Avon Tyrrell, we aim to engage, inspire and challenge learners, encouraging them to experiment and create their own pieces of art, craft and design.

Key areas covered may include:

1. Improving mastery of art and design techniques, including drawing, painting and sculpture with a range of materials
2. Increasing awareness of different kinds of art, craft and design

## Design and Technology

Developing a creative and technical understanding enables young people to perform task confidently and to participate successfully in a technological world. Learners need to learn to become resourceful, taking appropriate risks to develop ideas and solve problems.

Key areas covered include:

### Design

1. Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
2. Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

### Make

1. Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

### Evaluate

1. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

### Technical Knowledge

1. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures

## Geography

The Geography National Curriculum aims to ensure that all learners develop an understanding of the key physical and human geographical features of the world, as well as geographical key skills. The New Forest offers a wide range of geographical features for study.

### Human and physical geography

- 1) Describe and understand key aspects of:
  - a) Physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle
  - b) Human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water

### Geographical skills and fieldwork

1. Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied
2. Use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world

## History

Avon Tyrrell is steeped in local History – the house is a Grade I Listed building and is situated on the edge of The New Forest National Park.

1. A local history study
  - a. A study over time tracing how several aspects of natural history are reflected in the locality
  - b. A study of an aspect of history or site dating from a period before 1066 that is significant in the locality
2. A study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066

## **Physical Education**

With a wide range of outdoor activities available at Avon Tyrrell, there are many ways to link to the National Curriculum for Physical Education, to enable all young people to succeed and excel in a wide range of physically demanding activities. Our activities provide the perfect opportunity for learners to become physically confident in a way which supports their health and fitness.

1. Take part in outdoor and adventurous activity challenges both individually and within a team
2. Develop flexibility, strength, technique, control and balance

## Curriculum Links Reference Book: Key Stage 3

### **English**

The National Curriculum for English reflects the importance of spoken language in learners' development across the whole curriculum. Through our sessions, the benefits and curriculum links will vary greatly depending on the group, with each session being tailored to the needs of the group.

Sessions will particularly aid in the following:

- Learning of new vocabulary
- Use of descriptive English
- Using standard English confidently in a range of formal and informal contexts
- Classroom discussion and expression of own ideas
- Summarising and/or building on what has been said

The sessions provide multiple opportunities for extended learning, for example:

- Writing descriptive accounts
- Discussing outcomes
- Comparing and contrasting activities on site to those at school
- Presentation work

### **Mathematics**

Mathematics is integral to many Field Studies sessions, helping studies become fluid in their approach. The extent to which Mathematics is covered will greatly depend on the needs of the groups.

Sessions may aid in the following:

- Extending KS2 knowledge of numerical values to include decimals and fractions
- Ordering positive and negative integers, decimals and fractions
- Using concepts and appropriate vocabulary
- Using standard units of mass, length, time, money and other measures
- Rounding numbers and measures
- Using scale factors, scale diagrams and maps
- Describe, interpret and compare observed distributions
- Construction and interpretation of appropriate tables, charts and diagrams
- Description of simple mathematical relationships between variables

### **Citizenship**

We understand that citizenship education helps young people to develop the skills, knowledge and understanding required to prepare them to play a full and active part in society. The Citizenship curriculum is embedded within practice at Avon Tyrell. Learners are encouraged to work within a team environment, managing their own time and resources, making and debating reasoned arguments, and exploring social issues in a safe environment.

### **Science**

The principle focus of the Science National Curriculum at KS3, is to help learners become aware of the big ideas underpinning scientific understanding, and how these ideas interrelate. Field Studies sessions address a wide range of curriculum topics, with a particular focus on the Biology syllabus.

[Working Scientifically](#)

### *Scientific attitudes*

1. Pay attention to objectivity and concern for accuracy, precision, repeatability and reproducibility
2. Evaluate Risks

### *Experimental skills and investigations*

1. Ask questions and develop a line of enquiry based on observations of the real world, alongside prior knowledge and experience
2. Make predictions using scientific knowledge and understanding
3. Select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent and control variables, where appropriate
4. Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety
5. Make and record observations and measurements using a range of methods for different investigations; and evaluate the reliability of methods and suggest possible improvements
6. Apply sampling techniques

### *Analysis and evaluation*

1. Apply mathematical concepts and calculate results
2. Present observations and data using appropriate methods, including tables and graphs
3. Interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions
4. Present reasoned explanations, including explaining data in relation to predictions and hypotheses
5. Evaluate data, showing awareness of potential sources of random and systematic error
6. Identify further questions arising from their results.

## Subject content - Biology

### Structure and function of living organisms

#### *Cells and organisation*

1. The structural adaptations of some unicellular organisms
2. The hierarchical organization of multicellular organisms

#### *Nutrition and digestion*

1. The consequences of imbalances in the diet, including obesity, starvation and deficiency diseases
2. Plants making carbohydrates in their leaves by photosynthesis and gaining mineral nutrients and water from the soil via their roots

#### *Reproduction*

1. Reproduction in mammals
2. Reproduction in plants

### Material cycles and energy

#### *Photosynthesis*

1. The dependence of almost all life on Earth and the ability of photosynthetic organisms such as plants and algae, to use sunlight in photosynthesis to build organic molecules that are an essential energy store and to maintain levels of Oxygen and Carbon Dioxide in the atmosphere
2. The adaptations of leaves for photosynthesis

### Interactions and interdependencies

#### *Relationships in an ecosystem*

1. The interdependence of organisms in an ecosystem, including food webs and insect pollinated crops
2. The importance of plant reproduction through insect pollination in human food security
3. How organisms affect, and are affected by, their environment, including the accumulation of toxic materials

## Genetics and evolution

### *Inheritance, chromosomes, DNA and genes*

1. Heredity as the process by which genetic information is transmitted from one generation to the next
2. Differences between species
3. Changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction

## Subject content – Chemistry

### Earth and atmosphere

1. The composition of the Earth
2. The structure of the Earth
3. Earth as a source of limited resources and the efficacy of recycling
4. The carbon cycle
5. The composition of the atmosphere
6. The production of carbon dioxide by human activity and the impact on climate

## Subject content – Physics

### Motion and Forces

#### *Balanced Forces*

1. Opposing forces and equilibrium

#### *Forces and motion*

1. Forces being needed to cause objects to stop or start moving, or change their speed or direction of motion

## Art and Design

At Avon Tyrrell, we aim to engage, inspire and challenge learners, encouraging them to experiment and create their own pieces of art, craft and design.

Key areas covered include:

1. To use a range of techniques to record observations in sketchbooks, journals and other media as a basis for exploring their ideas
2. To use a range of techniques and media, including painting
3. To increase their proficiency in handling of different materials
4. To analyse and evaluate their own work, and that of others, in orders, in order to strengthen the visual impact or applications of their work
5. About the history of art, craft and design and architecture, including periods, styles and major movements from ancient times up to the present day

## Design and Technology

Developing a creative and technical understanding enables young people to perform task confidently and to participate successfully in a technological world. Learners need to learn to become resourceful, taking appropriate risks to develop ideas and solve problems.

Key areas covered include:

### Design

1. Identify and solve their own design problems and understand how to reformulate problems given to them
2. Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools

### Make

1. Select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties

### Evaluate

1. Test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups

### Technical Knowledge

1. Understand and use the properties of materials and the performance of structural elements to achieve functioning solution
2. Understand how more advanced mechanical systems used in their products enable changes in movement and force

## Geography

The Geography National Curriculum aims to ensure that all learners develop an understanding of the key physical and human geographical features of the world, as well as geographical key skills. The New Forest offers a wide range of geographical features for study.

### Human and physical geography

1. Understand, through the use of detailed place-based exemplars at a variety of scales, the key processes in:
  - a. Physical geography relating to: geological timescales and plate tectonics; rocks, weathering and soils; weather and climate, including climate change from Ice Age to present; and glaciation, hydrology and coasts
  - b. Human geography relating to: population and urbanization; international development; economic activity in the primary, secondary, tertiary and quaternary sectors; and the use of natural resources
2. Understand how human and physical processes interact to influence, and change landscapes, environments and the climate; and how human activity relies on effective functioning of natural systems

### Geographical skills and fieldwork

1. Build on their knowledge of globes, maps and atlases and apply and develop this knowledge routinely in the classroom and in the field
2. Interpret Ordnance Survey maps in the classroom and the field, including using grid references and scale, topographical and other thematic mapping, and aerial and satellite photographs.
3. Use fieldwork in contrasting locations to collect, analyse and draw conclusions from geographical data, using multiple sources of increasingly complex information

## History

Avon Tyrrell is steeped in local History – the house is a Grade I Listed building and is situated on the edge of The New Forest National Park.

1. A local history study
  - a. A depth study linked to social, cultural and technological change in post-war British society
  - b. A study over time, testing how far sites locally reflect aspects of national history (some sites may predate 1066)
  - c. A study of an aspect or site in local history dating from a period before 1066
2. A study of an aspect or theme in British history that consolidates and extends pupil' chronological knowledge from before 1066



## **Physical Education**

With a wide range of outdoor activities available at Avon Tyrrell, there are many ways to link to the National Curriculum for Physical Education, to enable all young people to succeed and excel in a wide range of physically demanding activities. Our activities provide the perfect opportunity for learners to become physically confident in a way which supports their health and fitness.

1. Take part in outdoor and adventurous activities, which present intellectual and physical challenges and can be encouraged to work in a team, building on trust and developing skills to solve problems, either individually or as a group
2. Take part in competitive sports and activities outside school through community links or sports clubs

## Curriculum Links Reference Book: Key Stage 4

### **English**

The National Curriculum for English reflects the importance of spoken language in learners' development across the whole curriculum. Through our sessions, the benefits and curriculum links will vary greatly depending on the group, with each session being tailored to the needs of the group.

Sessions will particularly aid in the following:

- Learning of new vocabulary
- Use of descriptive English
- Using standard English confidently in a range of formal and informal contexts
- Classroom discussion and expression of own ideas
- Summarising and/or building on what has been said

The sessions provide multiple opportunities for extended learning, for example:

- Writing descriptive accounts
- Working effectively in groups of different sizes and taking on required roles
- Discussing outcomes
- Comparing and contrasting activities on site to those at school
- Listening and responding in a variety of different contexts
- Evaluating content, viewpoints, evidence and aspects of presentation

### **Mathematics**

Mathematics is integral to many Field Studies sessions, helping studies become fluid in their approach. The extent to which Mathematics is covered will greatly depend on the needs of the groups.

Sessions may aid in the following:

- Extending KS3 knowledge to further develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.
- Use mathematical language and properties precisely
- Calculate with numbers in standard form
- Apply and interpret limits of accuracy when rounding
- Plot and interpret graphs
- Compare lengths, areas and volumes using ratio notation and/or scale factors
- Convert between related compound units
- Interpret the gradient of a straight line graph as a rate of change
- Construct and interpret plans and elevations of 3D shapes
- Infer properties of populations or distributions from a sample, whilst knowing the limitations of sampling
- Interpret, analyse and compare the distributions of data sets from univariate empirical distributions through:
  - Appropriate graphical representation involving discrete, continuous and grouped data
  - Applying statistics to describe a population
  - Use and interpret scatter graphs, recognize correlation, draw estimated lines of best fit, make predictions.

### **Citizenship**

We understand that citizenship education helps young people to develop the skills, knowledge and understanding required to prepare them to play a full and active part in society. The Citizenship curriculum is embedded within

practice at Avon Tyrell. Learners are encouraged to work within a team environment, managing their own time and resources, making and debating reasoned arguments, and exploring social issues in a safe environment.

## Science

The principle focus of the Science National Curriculum at KS4, is to develop learners analytical skills and start linking together big ideas in preparation for GCSE examinations. Our Field Studies sessions address a wide range of curriculum topics, with a particular focus on the Biology syllabus and Working Scientifically.

### Working Scientifically

#### *Scientific attitudes*

1. Evaluate risks in both practical science and the wider societal context, including perception of risk
2. Explaining everyday applications of science; evaluating associated personal, social, economic and environmental implications; and making decisions based on the evaluation of evidence and arguments

#### *Experimental skills and strategies*

1. Use scientific theories and explanations to develop hypotheses
2. Planning experiments to make observations, test hypotheses or explore phenomena
3. Applying a knowledge of a range of techniques, apparatus, and materials to select those appropriate for fieldwork and for experiments
4. Carrying out experiments appropriately, having due regard to the correct manipulation of apparatus, the accuracy of measurements and health and safety considerations
5. Recognising when to apply a knowledge of sampling techniques to ensure samples are collected are representative
6. Making and recording observations and measurements using a range of apparatus and methods
7. Evaluating methods and suggesting possible improvements and further investigations

#### *Analysis and evaluation*

1. Applying the cycle of collecting, presenting and analysing data
2. Presenting observations and other data using appropriate methods
3. Translating data from one form to another
4. Carrying out and representing mathematical and statistical analysis
5. Interpreting observations and other data, including identifying patterns and trends, making inferences and drawing conclusions
6. Presenting reasoned explanations, including relating data to hypotheses

#### *Vocabulary, units, symbols and nomenclature*

1. Developing their use of scientific vocabulary and nomenclature
2. Using SI units
3. Using prefixes and powers of ten for orders of magnitude
4. Interconverting units
5. Using an appropriate number of significant figures in calculations

### Subject content - Biology

#### Universal ideas

1. Living organisms may form populations of single species, communities of many species and ecosystems, interacting with each other, with the environment and with humans in many different ways
2. Living organisms are interdependent and show adaptations to their environment
3. Life on Earth is dependent on photosynthesis in which green plants and algae trap light from the Sun to fix carbon dioxide and combine it with hydrogen from water to make organic compounds and oxygen

4. The chemicals in ecosystems are continually cycling through the natural world

#### Photosynthesis

1. Photosynthesis as the key process for food production and therefore biomass for life
2. Factors affecting the rate of photosynthesis

#### Ecosystems

1. Levels of organization within an ecosystem
2. Some abiotic and biotic factors which affect communities; the importance of interactions between organisms in a community
3. How materials cycle through abiotic and biotic components of ecosystems
4. The role of microorganisms (decomposers) in the cycling of materials through an ecosystem
5. Organisms are interdependent and are adapted to their environment
6. The importance of biodiversity
7. Methods of identifying species and measuring distribution, frequency and abundance of species within a habitat
8. Positive and negative human interactions with ecosystems

#### Evolution, inheritance and Variation

1. Genetic variation in populations of species
2. The evidence for evolution
3. Developments in biology affecting classification

#### Subject content – Chemistry

##### Earth and atmosphere

1. Potential effects of, and mitigation of, increased levels of carbon dioxide and methane on the Earth's climate
2. Common atmospheric pollutants; Sulphur dioxide, oxides of nitrogen, particulates and their sources
3. The Earth's water resources and obtaining potable water

At KS4, our Field Studies sessions offer a wide range of practical scientific skills as well as curriculum knowledge.

#### Art and Design

At Avon Tyrrell, we aim to engage, inspire and challenge learners, encouraging them to experiment and create their own pieces of art, craft and design.

Sessions may support the following areas:

- Active engagement in the creative process of art, craft and design
- Development of effective and independent learners
- Encourage confidence in risk taking and learning from experience
- Developing critical understanding
- Acquisition and development of technical skills through working with a broad range of media, materials, techniques, processes and technologies with purpose and intent

#### Design and Technology

Developing a creative and technical understanding enables young people to perform task confidently and to participate successfully in a technological world. Learners need to learn to become resourceful, taking appropriate risks to develop ideas and solve problems.

## Geography

The Geography National Curriculum aims to ensure that all learners develop an understanding of the key physical and human geographical features of the world, as well as geographical key skills. The New Forest offers a wide range of geographical features for study.

### Universal ideas

1. Develop and extend KS3 Knowledge of locations, places, environments and processes.
2. Gain understanding of the interactions between people and environments, changes in places and processes over space and time, and the interrelationship between geographical phenomena at different scales and in different contexts
3. Develop and extend their competence in a range of skills including those used in fieldwork, including map use
4. Apply geographical knowledge, understanding, skills and approaches appropriately and creatively to real world contexts, including field work
5. Develop well-evidenced arguments drawing on their geographical knowledge and understanding

### Locational Knowledge

1. Recognition of important links and inter-relationships between places and environments at a range of scales from local to global

### Maps, fieldwork and geographical skills

1. Develop the use of a range of maps, atlases, Ordnance Survey maps, satellite imagery and other graphic and digital material
2. To make maps and sketches to present and interpret geographical information
3. Different approaches to fieldwork undertaken in at least two contrasting environments. Fieldwork overall should include exploration of physical and human processes and the interactions between them and should involve a collection of primary physical and human data
4. Data should include both qualitative and quantitative data and data from both primary and secondary sources
5. Includes the effective presentation, communication and evaluation of material

### Place: processes and relationships

1. Geography of the UK – Knowledge and understanding of the UK's geography, both in overview and with some in depth study, to include its physical and human landscapes, environmental challenges, changing economy and society, the importance of cultural and political factors, and its relationships with the wider world.

## History

Avon Tyrrell is steeped in local History – the house is a Grade I Listed building and is situated on the edge of The New Forest National Park.

We understand that, depending on your syllabus, your curriculum needs will vary. That is why we tailor our sessions depending on the needs of the group.

In the past, we have developed:

- Local history studies – with Burley on our doorstep, there is plenty of opportunity to look at our local history.
- Historical studies of the Main House – our Calendar House is a unique building with an interesting history.

## Physical Education

With a wide range of outdoor activities available at Avon Tyrrell, there are many ways to link to the National Curriculum for Physical Education, to enable all young people to succeed and excel in a wide range of physically demanding activities. Our activities provide the perfect opportunity for learners to become physically confident in a way which supports their health and fitness.

Young people can take part in outdoor and adventurous activities, which present intellectual and physical challenges and are encouraged to work in a team, building on trust and developing skills to solve problems, either individually or as a group. There is the opportunity to develop leadership skills in preparation for the coaching elements of GCSE Physical Education, as well as the chance to try new activities and develop their portfolio further.